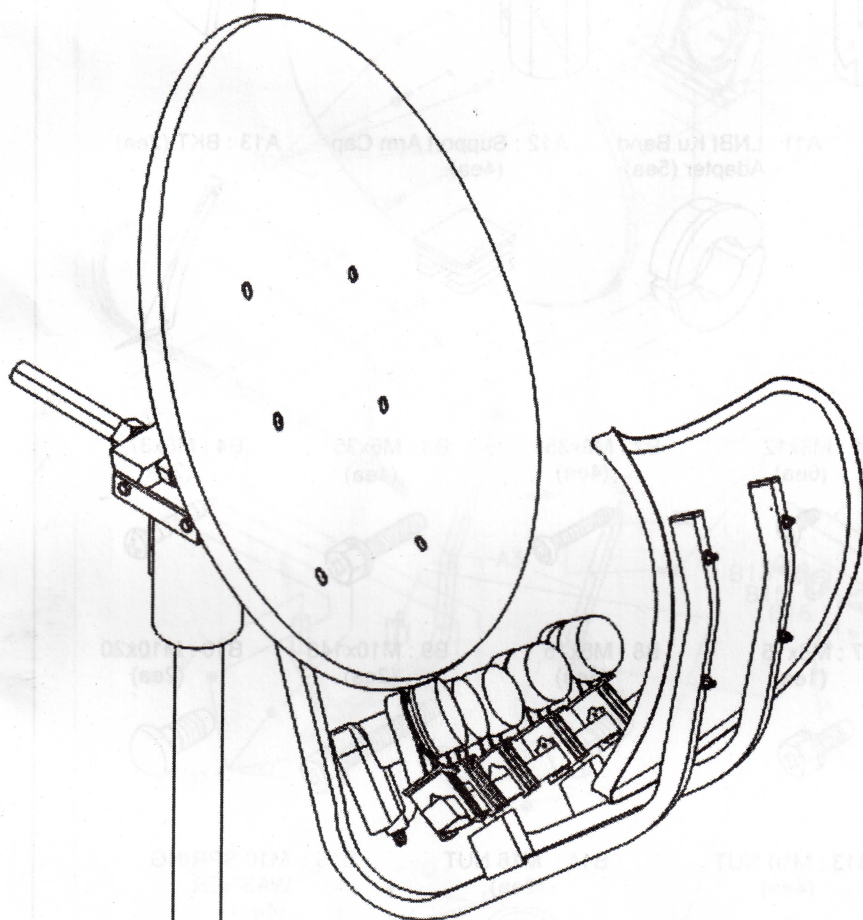
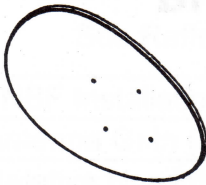


Installation Manual for Toroidal 90 Multi-beam satellite antenna

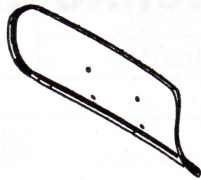


It was developed using a toroidal formula, while other existing satellite antenna apply parabolic formula. Signals are reflected twice through the main reflector and a sub reflector, forming a focal line created by focal points along the bottom of the main reflector, making the TOROIDAL function as a multi-beam antenna that receives broadcast & communication satellites at the same time.

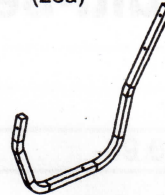
A1 : Main Reflector
(1ea)



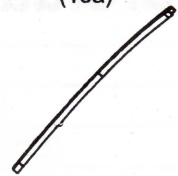
A2 : Sub Reflector
(1ea)



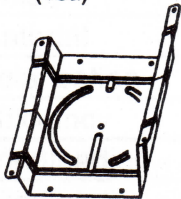
A3 : Support Arm
(2ea)



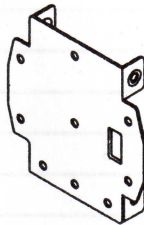
A4 : LNBF Guide
(1ea)



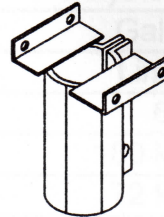
A5 : Back Mount Tilt
(1ea)



A6 : Back Mount Elevation
(1ea)



A7 : Weaving Tube
(1ea)



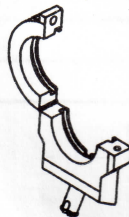
A8 : LNBF Guide Seat
(2ea)



A9 : Holder Supporter
(5ea)



A10 : LNBF Ku Band
Holder (5ea)



A11 : LNBF Ku Band
Adapter (5ea)



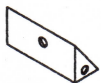
A12 : Support Arm Cap
(4ea)



A13 : BKT (2ea)



A14 : BKT
(1ea)



A15 : M16 T-Bolt
(1ea)



B1 : M6x12
(6ea)



B2 : M6x35
(4ea)



B3 : M6x35
(4ea)



B4 : M6x37
(2ea)



B5 : M5x15
(2ea)



B6 : M5x15
(15ea)



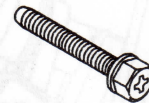
B7 : M8x15
(1ea)



B8 : M8x15
(6ea)



B9 : M10x140
(2ea)



B10 : M10x20
(2ea)



B11 : M6 NUT
(18ea)



B12 : M8 NUT
(7ea)



B13 : M10 NUT
(4ea)



B14 : M16 NUT
(2ea)



B15 : M10 SPRING
WASHER
(4ea)



B16 : M10
WASHER (6ea)



B17 : M16
WASHER (2ea)

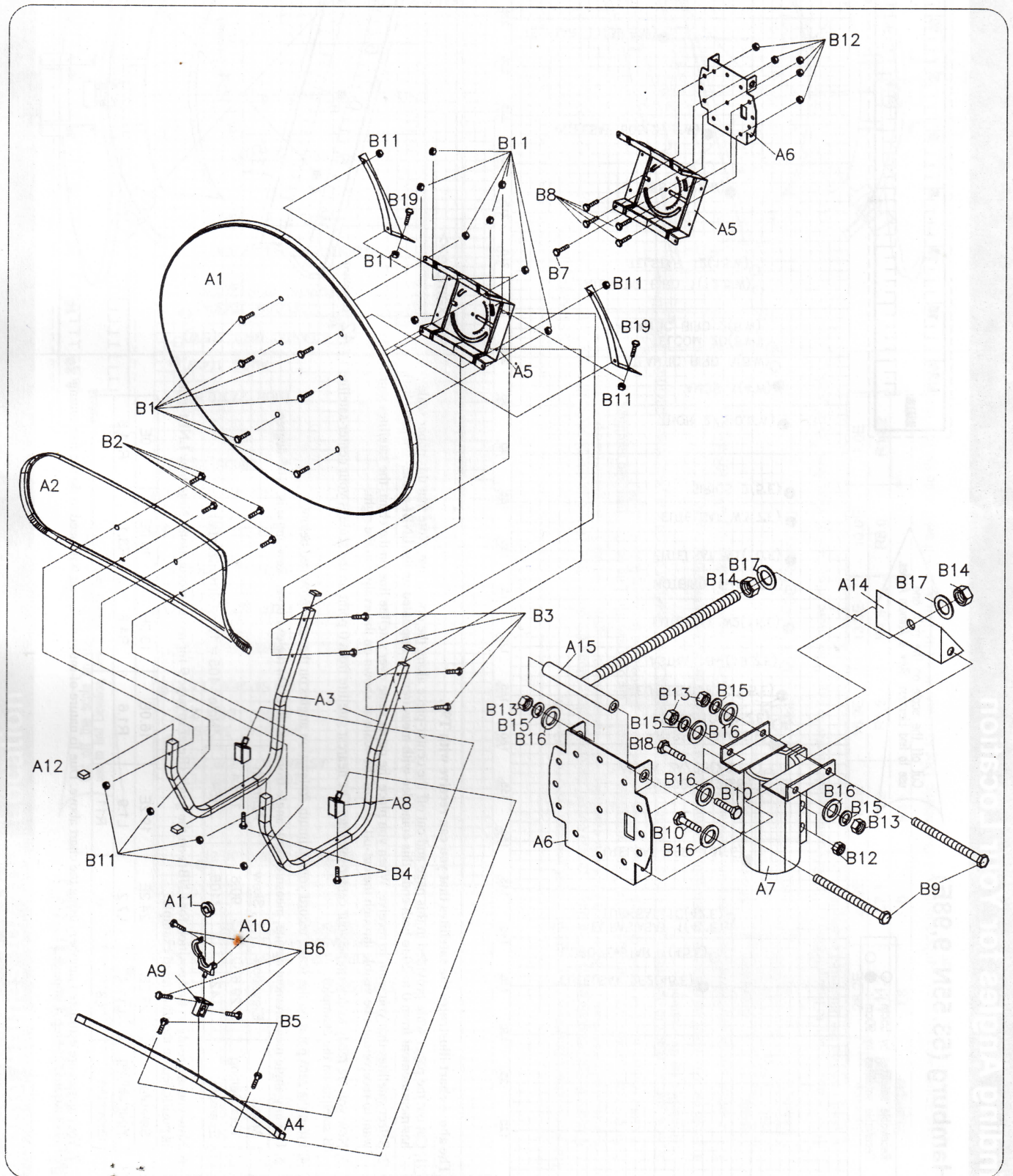


B18 : M6x20 (2ea)



B19 : M6x12 (2ea)





Model		TOROIDAL 90
Main Reflector	Vertical Axis	96.7 cm
	Horizontal Axis	108.6 cm
Sub Reflectore	Height	36.1 cm
	Width	83.6 cm
LNBF Installation		1~16 LNBFs
Antenna Gain (at 12.5 GHz)		39.65 dB (± 0.45 dB)
Relative Humidity		0% ~ 90%
Operating Temperature		-30°C ~ +60°C
Finish		Polyster Powder Coating
Material		Galvanized Steel
Polarization		Linear & Circular
Efficeincy		65% ~ 80%
Windloading - Survival		180 km/h (112 mph)
Windloading - Operational		72 km/h (45 mph)
Reception Frequency		10.70~12.75 GHz
Multi Satellite Azimuth Range		$\pm 30^\circ$
Multi Satellite Range in Arc		$\pm 20^\circ$ in arc
Color		Dark Gray /Gray / Whit Gray
Suitable Pole Diameter		60 mm